



# LI Science & Engineering Fair, Inc.

Promoting Excellence in Scientific Inquiry and Discovery in LI Schools

## LISEF 2017 Grand Award Winners

	Award	Name	School	Title
Animal Sciences	First	Charity Russell	Commack High School	<i>Manipulating Odor-Driven Behavior in Fruit Flies (<i>Drosophila melanogaster</i>)</i>
	Second	Joseph Gabriel Ribaudó	Kings Park High School	<i>The Analysis of Sex Hormones on the Cognitive Rigidity and Behavioral Characteristics in a <i>Rattus norvegicus</i> Model of Pre-motor Parkinson's Disease</i>
	Third	Steven James Montalto	Sayville High School	<i>Analysis of the Cytochrome C Oxidase I and II Genes in Cadmium and Roundup™-treated Compost Worms (<i>Eisenia fetida</i>)</i>
	Third	Kirti Nath	Ward Melville High School	<i>Assessing the developmental and metabolic toxicity of neuroactive pharmaceuticals using early life stage zebrafish (<i>Danio rerio</i>)</i>
	Third	Hannah Emily Rosenthal	Smithtown High School West	<i>The Sixth Sense in Mammals: Using Genetics to Understand the Evolution of the Vomeronasal Organ</i>
	Honorable M	Sarah Elizabeth Adamo, Susell Contreras	Smithtown High School West	<i>Using <i>Nematostella vectensis</i> to spotlight the ancient roots of Nicotinic Cholinergic Neurotransmission</i>
	Honorable M	Reeda Iqbal	Brentwood High School	<i>Marsh Mussels May be Muscles for Nitrogen</i>

				<i>Pollution Mitigation.</i>
	<b>Honorable M</b>	<b>Sonali Persaud, Annie Tao</b>	East Meadow High School	<i>The Effect of the BLMP-1 Transcription Factor on Oscillatory Gene Expression in Caenorhabditis elegans</i>
<b>Behavioral and Social Sciences</b>	<b>First</b>	<b>Anuj Gupta</b>	Roslyn High School	<i>Do Parents Really Know Best? Investigating the Relationship between Perceived Parental Goals and Academic Factors.</i>
	<b>First</b>	<b>Chloe Ann Levin</b>	Roslyn High School	<i>Dress to Impress: The Influence of the Enclothed Cognition Effect on Self-Esteem and Self-Efficacy</i>
	<b>Second</b>	<b>Michael William Nachman</b>	Paul D. Schreiber High School	<i>An Analysis of Presidential Primaries as General Election Predictors</i>
	<b>Second</b>	<b>Zhitong Wang</b>	Jericho High School	<i>Computational Modeling of Neuronal Networks: Clarifying Neural Dynamics for Neuropathological Investigations</i>
	<b>Third</b>	<b>Sophie Mikaela Heiman</b>	Plainview Old Bethpage JFK High School	<i>The Effects of Inflated Praise on Actively Open-Minded Thinking</i>
	<b>Third</b>	<b>Alyssa Rust</b>	Roslyn High School	<i>Should the Radio Be Band? The Effects of Listening to Music on Driver Error and Stress</i>
	<b>Third</b>	<b>Amy Rose Shteyman</b>	John L. Miller Great Neck North High School	<i>The neuroscience behind smiling: An fNIRS correlation of facial expressions with neural activity</i>
	<b>Third</b>	<b>David Joseph Naiburg Weissman</b>	Plainview Old Bethpage JFK High School	<i>Investigating Various Determinants of Social Media Responses to the Pulse Nightclub Shooting Across America</i>
	<b>Honorable M</b>	<b>Andrew Carlins</b>	Oceanside High School	<i>Speech-Focused versus Integrated Stuttering Treatment: Speech Therapists' Perspectives</i>

	<b>Honorable M</b>	<b>Justin Ross Cohen</b>	Syosset High School	<i>Psychopathology in 9/11 Responders Exposed to Hurricane Sandy: Examining the Interactive Effects of Exposure and Resilience</i>
	<b>Honorable M</b>	<b>Kamyar Ghiam</b>	Roslyn High School	<i>The Perils of Pressure: An Analysis of the Predictors Associated with Academic Dishonesty, Self-Esteem, and Sleep</i>
	<b>Honorable M</b>	<b>Maxwell Raphael Schulman</b>	Plainview Old Bethpage JFK High School	<i>Evaluating the Impact of Political Labeling on Herding Behavior and Cognitive Strain</i>
	<b>Honorable M</b>	<b>Michael Sternbach</b>	Bellmore John F. Kennedy High School	<i>Are Yield Curve Inversions Harbingers of Economic Contractions in Emerging Market and Excessively Debt Ridden Countries?</i>

<b>Biochemistry and Translational Medicine</b>	<b>First</b>	<b>Rahul Chaudhry, Sahil Chaudhry</b>	Syosset High School	<i>A Novel Model to Efficiently Embody Platelet Morphological Change</i>
	<b>Second</b>	<b>Ruiwen Fu</b>	Jericho High School	<i>Potent treatment of renal fibrosis: A novel inhibitor of HIPK2-Smad3 interaction</i>
	<b>Second</b>	<b>Elin C Hu, Vanessa J Zhang</b>	Manhasset High School	<i>Using Antioxidants to Counteract Mitochondrial Dysfunction and <math>\alpha</math>-synuclein Aggregation in Parkinson's disease</i>
	<b>Third</b>	<b>Jillian Rose Pesce</b>	Smithtown High School East	<i>The Effect of Nutrient Levels on Chemotherapeutic Drug Efficacy in NCI-H460, Non-Small Cell Lung Carcinoma Cells</i>
	<b>Third</b>	<b>Sarah M Romanelli</b>	Oceanside High School	<i>The structural, mechanistic, and clinical applications of NT5C2 in drug resistance and relapse of T-ALL</i>
	<b>Honorable</b>	<b>Jordan</b>	Commack	<i>The Efficacy and Effects of Combined BCL6-BTB and</i>

	<b>M</b>	<b>Cooper</b>	High School	<i>Survivin Inhibition in Diffuse Large B-cell Lymphoma</i>
	<b>Honorable M</b>	<b>Logan Benjamin Samuel</b>	Half Hollow Hills East	<i>The Effects of Indomethacin on Cardiac Protein Degradation in Mice</i>
	<b>Honorable M</b>	<b>Ryan Wu</b>	Manhasset High School	<i>Next Generation Therapy for Treatment of Cancer: Apoptosis, Vascular Disruption, and Nanoemulsion</i>

<b>Biomedical and Health Sciences</b>	<b>First</b>	<b>Mohamed Ehab El-Abtah</b>	Syosset High School	<i>Hepatic Stellate Cell-Targeting Nanoparticles for Hepatocellular Carcinoma Chemoprevention</i>
	<b>First</b>	<b>Anjali Maheshwari</b>	Half Hollow Hills West	<i>Using a Kinect-Based Framework for Human Motion Capture to Assist Stroke Rehabilitation Patients</i>
	<b>Second</b>	<b>Vincent Yao, Jarrad Li</b>	Roslyn High School	<i>Anti-cancer effects and Targeting of Bcl-2 Induced by Perilla frutescens on Non-Hodgkin Lymphoma</i>
	<b>Third</b>	<b>Sanjana Eranki</b>	Smithtown High School East	<i>DNA Demethylation Upregulates Alkaline Ceramidase 2 and Bioactive Sphingolipids in Cancer Cells</i>
	<b>Third</b>	<b>Erika Nemeth</b>	Smithtown High School East	<i>Cell-Based Delivery of Gene-Silencing Products Via Gap Junction Channels</i>
	<b>Third</b>	<b>Jake Andrew Nieto</b>	Commack High School	<i>An Empirical Biomarker-based Calculator for Autosomal Recessive Polycystic Kidney Disease</i>
	<b>Honorable M</b>	<b>Zachary Lee</b>	Lynbrook High School	<i>A Comparison Study of Interferential and Pre-Modulated Electrical Stimulation on the Rehabilitation of Total Knee Arthroplasty</i>
				<i>High Levels of ETS Family</i>

	<b>Honorable M</b>	<b>Justin Eric Leu</b>	Roslyn High School	<i>Members Cause Resistance to BRAF and MEK Inhibitors in Melanoma</i>
	<b>Honorable M</b>	<b>Caitlin Cristina Unkenholz</b>	Smithtown High School West	<i>The effects of a single nucleotide polymorphism in the response regulator PhoP acquired during Yersinia pestis evolution on the binding affinity to the ugd gene promoter</i>

<b>Biomedical Engineering</b>	<b>First</b>	<b>Rachel Sara Sacks, Gila Rachel Schein</b>	Hebrew Academy of the Five Towns and Rockaways	<i>The Influence of Metallized Graphene Oxide/Reduced Graphene Oxide and Sulfonated Polystyrene on Dental Pulp Stem Cell Differentiation and Protein Adsorption</i>
	<b>Third</b>	<b>Mutahara Nuri Bhuiyan</b>	Jericho High School	<i>Manipulating Matter on the Nanoscale: Incorporation of a Branched Junction Inside a DNA Triangle</i>
	<b>Honorable M</b>	<b>Renata Dominique Bruno</b>	Kings Park High School	<i>An Investigation of the Effects of Low Intensity Vibrations on Lipid Characteristics in 3T3-L1 Adipocytes in Vitro</i>
	<b>Honorable M</b>	<b>Shaminta Hamidian</b>	William A. Shine Great Neck South High School	<i>Exploring Structural and Functional Connectivity of Human Motor System using Diffusion Tensor Imaging and Resting State Functional MRI</i>

	<b>First</b>	<b>Marc Huo</b>	Jericho High School	<i>Circumventing traditional bottlenecks in glioma genetic therapy: ultra-pH sensitive nanodelivery vehicles</i>
	<b>First</b>	<b>Michael William Lai</b>	Jericho High School	<i>Identification of TBX3 as a Novel Regulator of Lung Angiogenesis</i>
	<b>Second</b>	<b>Sachin Patnaik</b>	Ward Melville High School	<i>A Novel Co-culture System for Efficient Differentiation of Hemangioblasts to CD31<sup>+</sup> Endothelial Progenitors</i>

Cellular & Molecular Biology	Second	Jennifer Elizabeth Rakhimov	Bellmore John F. Kennedy High School	<i>Mitochondrial Replacement Therapy in Degenerated Retinal Pigment Epithelial Cells</i>
	Third	Sophie Bien-Aime	Elmont Memorial High School	<i>Rapamycin and Starvation Resistance and their Effect on Locomotion and Longevity in Drosophila melanogaster</i>
	Third	Lindsay Anne Mistretta	Plainedge High School	<i>An RNA-Sequencing Analysis of Conserved Processes within the Gustatory and Other Biological Systems: novel interpretations of gene functionality</i>
	Third	Emily Ann Peterson	Smithtown High School East	<i>Lecithin-Retinol Acyl Transferase in Squamous Cell Carcinoma: The Relationship Between Oncology and Wound Repair</i>
	Third	Melody Chen Yang	William A. Shine Great Neck South High School	<i>Characterization of Lipid Membrane-Associated Proteins from Mycobacteria</i>
	Honorable M	Ananya Devi Bansal, Megan Augusta Kirschner	The Wheatley School	<i>The Effects of Coconut Oil on the Alzheimer's homolog <i>apl-1</i> in C. elegans</i>
	Honorable M	Elisabeth Dimitratos	William A. Shine Great Neck South High School	<i>Watch the Gap: A novel mechanism by which mutant p53 may exert its oncogenic properties in inflammation-related cancers.</i>
	Honorable M	Aman Malhotra, Joshua Ibrahim, Ethan Ertel	Half Hollow Hills East	<i>The use of miR-137 to Contrast its Effects Between Malignant Melanoma and Somatic Cells Toward the Development of A MicroRNA Based Therapeutic For Malignant Melanoma</i>
	Honorable	Ava Marie	Sayville High	<i>Using Barcoding Techniques on Lepidoptera Samples for Assessing</i>

	<b>M</b>	<b>McNevin</b>	School	<i>Authenticity of Species in Commercially Available Specimens.</i>
	<b>Honorable M</b>	<b>Setu Parag Mehta</b>	Herricks High School	<i>IRF5 Deficiency Leads to Increased Proliferation in Luminal Epithelial Cells, Contributing to Mammary Tumorigenesis</i>
	<b>Honorable M</b>	<b>Yingdong Wen</b>	Long Island Lutheran High School	<i>The Potential Molecular Effects of Caffeine on Human Long-term Memory</i>

<b>Chemistry and Materials Science</b>	<b>First</b>	<b>Archana Verma</b>	Jericho High School	<i>Spin-Orbit Coupling Induced Heterogeneous Excited-State Dynamics in 6-Coordinate Transition Metal Protodyes</i>
	<b>Second</b>	<b>Alby John Joseph</b>	W. Tresper Clarke High School	<i>Optimized Fatty Acid Binding Protein Inhibitors: Augmenting the Viability of a Novel Pain-Relief Mechanism</i>
	<b>Second</b>	<b>Kristian Ming Nilsen</b>	Oceanside High School	<i>Growth of monolayer MoSe2 and WSe2 with the assistance of halide catalysts</i>
	<b>Third</b>	<b>Grace Hu</b>	Jericho High School	<i>Multifunctional NGF-Au-SPIO Nanoparticles: Magnetically Directing Neurite Extension and Orientation</i>
	<b>Third</b>	<b>William Jia-Cheng Zheng, Chiu Fan Bowen Lo</b>	William A. Shine Great Neck South High School	<i>Experimental, Electromagnetic, and Graph Theoretical Analysis of Plasmonic Near-Field Enhancement in Random Gold Nanoparticle Arrays</i>
	<b>Honorable M</b>	<b>Julia Shawn Goldsamt</b>	John L. Miller Great Neck North High School	<i>The Functionalization of Copper Oxide Nanosheets for Environmental Purposes</i>
	<b>Honorable M</b>	<b>Omar Amadis Ramos, Ryan Von Hof</b>	Walt Whitman High School	<i>The Development and Analysis of Inorganic Pigments</i>
	<b>Honorable</b>	<b>Adam Hunter Stein</b>	Half Hollow Hills East	<i>Role of Symmetry in the Core of Star Mesogens</i>

		M		
Computational Biology and Bioinformatics	First	<b>Raymond Minor Huffman</b>	Manhasset High School	<i>Computational Analysis of Intron Retention Events in Alternatively Spliced mRNA</i>
	Second	<b>Matthew Paltiel Weinstein</b>	John L. Miller Great Neck North High School	<i>Identification of High-Risk Tumor Subtypes Via Unsupervised Clustering of RNA Expression and VIPER Transcriptional Factor Activity</i>
	Third	<b>Samantha Victoria D'Alonzo</b>	Paul D. Schreiber High School	<i>Statistical Modeling and SIR Modeling in New York State Counties of Syndrome X based on Text Based Indicators from Social Media and Food Environment</i>
	Third	<b>Anjali R Verma</b>	Kings Park High School	<i>Examining the Effects of Fatty Acid Binding Protein and Neuron-Astrocyte Signaling on CB1 Receptor Activation Using a Computational Model of the Endocannabinoid System</i>
	Honorable M	<b>Caitlin Chou</b>	Herricks High School	<i>Predicting Optimal and Relevant Genes for Future Study</i>
	Honorable M	<b>Andrea He</b>	Syosset High School	<i>Probing Neurovascular Coupling Efficiency in Neurodegenerative Diseases</i>
		First	<b>Abbigayle Emily Cuomo</b>	Commack High School
First		<b>Gilbert Granger Spencer</b>	Half Hollow Hills West	<i>An Analysis of the Atmospheric Record Using Ice Cores from WAIS Divide</i>
Second		<b>Caitlin Elizabeth Gormley</b>	Sayville High School	<i>Physical Risk Analysis and Potential Health Outcomes from Hydrofracturing Activities Using Geospatial Analytics in the Marcellus</i>



<b>Earth and Environmental Sciences</b>				<i>Shale, USA</i>
	<b>Second</b>	<b>Rubin Smith</b>	William A. Shine Great Neck South High School	<i>Reconstruction of Topography and Examination of Mammal Diversity Evolution within the Basin and Range of Western North America Since 36 Ma</i>
	<b>Third</b>	<b>Lauren Bulik Taylor Bulik, Emily Anne McDonnell</b>	Long Beach High School	<i>Collecting, Analyzing and Studying Microplastics in Reynolds Channel</i>
	<b>Third</b>	<b>Alan Chen</b>	Herricks High School	<i>Understanding the Mobility of Important Trace Elements During Basalt Weathering with Implications for the Mars 2020 Rover Mission</i>
	<b>Third</b>	<b>Jordan Stanley Matuszewski</b>	Sachem High School East	<i>The Negative Effects of Glyphosate on Soil Ecology</i>
	<b>Third</b>	<b>Muzaffer Cuneyd Tasoglu, Anoop Singh</b>	Commack High School	<i>The Relationship between the North Atlantic Oscillation and the Atlantic Meridional Overturning Circulation</i>
	<b>Honorable M</b>	<b>Harrison Gifford Bench</b>	Sayville High School	<i>Microhabitat Analysis of the Green Point Tidal Wetlands Complex</i>
	<b>Honorable M</b>	<b>Kaitlyn Rose Cisz, Charlotte Marie Heo, Younghyun N/A Yoon</b>	Long Island Lutheran High School	<i>The Effect of Various Deicers on the Rate of Elodea Photosynthesis</i>
	<b>Honorable M</b>	<b>Jade Imani Dickenson, Sofie Bri Wilson</b>	Walter G. O'Connell Copiague High School	<i>A novel investigation surrounding Geukensia demissa as a probable control mechanism for the invasive species Phragmites australis</i>
	<b>Honorable M</b>	<b>Casey James Macolino</b>	Northport High School	<i>The Nitrogen Cycle in Restored Spartina Marshes of Different Age in Jamaica Bay, NY</i>
		<b>Caroline</b>		<i>Vulnerability and Risk Predictions Derived</i>

	Honorable M	Nicole Schwab	North Shore High School	<i>through the History of Flooding in the Ohio River Valley</i>
	Honorable M	Erica Sze-Tu, Elizabeth Christine Ryan	Mineola High School	<i>The Effect of Locomotive Emissions on Long Island Plant Diversity</i>
Embedded Systems & Engineering Mechanics & Robotic	First	Scott Soifer	North Shore Hebrew Academy High School	<i>The Heat Free Car - Vehicular Heatstroke Prevention System (Second-Generation Prototype)</i>
	Second	Michael Yoomin Lee	Manhasset High School	<i>MFT: Improving Shallow CNN Object Tracking with Domain-Separated Feeds</i>
	Third	Jared Douglas Habermehl	Commack High School	<i>Implementing Secure Networks for the "Internet of Things"</i>
	Honorable M	Adam Michael Canarick	Syosset High School	<i>Assitive Tennis Technology</i>
	Honorable M	Grace Elizabeth Smith	Plainview Old Bethpage JFK High School	<i>Determining the Efficacy of Carbon Fiber vs Fiberglass Composite Stabilization Bar in Aircraft Landing Gear</i>
Energy: Chemical and Physical	First	Dahyun Elle Park, Jordan Brett Sanford	Syosset High School	<i>Utilization of Epigallocatechin gallate (EGCg) as a Shewanella putrefaciens ATP Synthase Inhibitor to Maximize Microbial Fuel Cell Performance</i>
	First	Pavit Suri	W. Tresper Clarke High School	<i>What is the Effect of Cellulose, as per the Conversion of P-nitrophenol Glucopyranoside into P-nitrophenol and Glucose, on the Production of Cellulosic Ethanol from Cardboard vs. Inedible Plant Material in Biofuel Manufacturing?</i>
				<i>Optimizing Dye-Sensitized</i>

	<b>Third</b>	<b>Stephen Lee, Fred Chu</b>	Manhasset High School	<i>Solar Cells (DSSCs): Novel Methods of Efficiency and Thermal Sustainability</i>
	<b>Honorable M</b>	<b>Brandon Ray Feng, Daniel Hyunsoo Lee</b>	Ward Melville High School	<i>A Robust Sensor Network-based Estimation Model for Wind Fields</i>
	<b>Honorable M</b>	<b>Anushka Roy</b>	Comsewogue High School	<i>Zeolites Framework Effect on the Furfuryl Alcohol Conversion and Products Selectivity: Analytic and Characterization Investigation</i>

<b>Environmental Engineering</b>	<b>First</b>	<b>Kendra Zhang</b>	Jericho High School	<i>A paper-based microbial fuel cell for self-powered, low-cost glucose monitoring in saliva</i>
	<b>Second</b>	<b>Ryan Thorpe, Rachel Chang</b>	Manhasset High School	<i>The Development of a Mechanized Approach to Rapidly and Sensitive Detect and Purify Water Contaminated with Shigella, E. coli, Salmonella, and Cholera Through the Use of Carbon-Based Biosensors in Conjunction with Arduino-Controlled Micropipettes</i>
	<b>Third</b>	<b>Smiti Ketan Shah</b>	Bethpage High School	<i>Efficient Nano-Based Water Filter: A Novel Application of Biosynthesized Silver Nanoparticles (AgNP) and Water Based Carbon Nanotube (CNT) Ink</i>
	<b>Third</b>	<b>Hannah Alexis Ueshiro</b>	Sachem High School East	<i>Effect of Cyanobacteria and Biochar on germination rates and percentages of agricultural crops</i>
	<b>Honorable M</b>	<b>Jessica Nicole Horowitz</b>	Half Hollow Hills West	<i>Consolidation of Cs<sub>2</sub>SnI<sub>6</sub> for Nuclear Waste Applications</i>
	<b>Honorable M</b>	<b>Nicos Prokopiou</b>	West Islip High School	<i>The Development of Copper Filtration Systems to Reduce the Viability of Aqueous E. coli</i>

	<b>Honorable M</b>	<b>Iyin Tugbobo</b>	Elmont Memorial High School	<i>Augmentation of concrete composites using Shear Thickening Fluids</i>
<b>Mathematics</b>	<b>First</b>	<b>Anton Wu</b>	Half Hollow Hills East	<i>Discrete Ricci Flow on Discrete 3-Manifolds</i>
	<b>Second</b>	<b>Nora E Koe</b>	Herricks High School	<i>Shorter Shares for Formula Secret Sharing</i>
	<b>Third</b>	<b>Albert Yan Liu</b>	Ward Melville High School	<i>Anomaly Detection in Time Series of Dependent Stochastic Block Model Graphs</i>
	<b>Honorable M</b>	<b>Soham Maiti</b>	Bethpage High School	<i>Understanding the Derivation of General Relativity and Our Movement Through Space-Time</i>
	<b>Honorable M</b>	<b>Vinny Pagano</b>	Long Beach High School	<i>Comparison of Lagrangian and Multivariate Interpolation</i>
<b>Microbiology</b>	<b>First</b>	<b>Raphael Leon Iskra</b>	Commack High School	<i>The Effects of Nitazoxanide on Chaperone/Usher Pathway Assembled Virulence Factors in Gram-negative Bacteria</i>
	<b>Second</b>	<b>Christopher Hyunjoon Moon</b>	Syosset High School	<i>Identification of Novel Immunoreactive Antigens of Babesia microti</i>
	<b>Third</b>	<b>Joel Lima</b>	Elmont Memorial High School	<i>Biochemical and Structural Study of the Escherichia Coli Transcription Elongation Complex with <math>\hat{\lambda}</math>N and HK022 Nun</i>
	<b>Honorable M</b>	<b>Zan Z Ahmed</b>	Syosset High School	<i>Solubility Enhancement of the BHBM Drug through an In Vitro Cryptococcal Neoformans and J774A.1 Murine Cell Line Model</i>
	<b>Honorable M</b>	<b>Cindy Li</b>	Smithtown High School East	<i>Investigation of innate immune response against Candida albicans in mouse immune cells</i>

<b>Physics and Astronomy</b>	<b>First</b>	<b>Rushabh Mehta</b>	Syosset High School	<i>Exact Muon Orbit Distortion with <math>E821 \hat{I}^2</math> function</i>
	<b>Second</b>	<b>Nestor O Tkachenko</b>	Ward Melville High School	<i>Can Cars Fly? Eddy Current Magnetic Levitation as Viable Technology</i>
	<b>Third</b>	<b>Jason Getzler</b>	Plainview Old Bethpage JFK High School	<i>Controlling Coherence in the Product Channel from a Direct, Uni-Molecular Dissociation Reaction</i>
	<b>Third</b>	<b>Matthew Ko</b>	William A. Shine Great Neck South High School	<i>Extraction of the Specific Shear Viscosity of the Quark-Gluon Plasma from Measurements of Flow Harmonics in Au+Au Collisions at 200 GeV</i>
	<b>Honorable M</b>	<b>Adam Arash Pahlavan</b>	Jericho High School	<i>Connecting the Spin-Diluted Ising Model to Bacterial Chemotaxis: A Cluster-Based Approach to Characterizing Chemoreceptor Dynamics</i>
	<b>Honorable M</b>	<b>Ziad Walid Sabry</b>	Lindenhurst Senior High School	<i>Something from Nothing: Signal in 280,000 Measurements of Empty Sky</i>

<b>Systems Software</b>	<b>First</b>	<b>Talia Blum</b>	Plainview Old Bethpage JFK High School	<i>Optimizing Supercomputer Topologies: Developing Probabilistic Algorithms to Construct More Efficient Node Networks to Increase Supercomputer Speed</i>
	<b>Second</b>	<b>Suki R Tekverk</b>	Kings Park High School	<i>The Design of an "A Programming Language" Library for Financial Data Calculations and Analysis™, Paired with a Solving Algorithm</i>
	<b>Third</b>	<b>Kyle Anthony Markland</b>	Rocky Point High School	<i>Improving GPS Accuracy Through Integration of an IMU and Novel Software</i>
	<b>Honorable M</b>	<b>Shani Kahan</b>	North Shore Hebrew Academy High School	<i>Search Engine Optimization (SEO): Majestic Backlink Exporter</i>



**Honorable  
M**

**Jacob R  
Strieb**

Huntington  
High School

*Assessing the security of  
the Mainline DHT  
BitTorrent network with  
regard to malware*